

ABSTRACT OF THE DISCLOSURE

This invention relates to a method of forming a three-dimensional (3D) dosimetric map in a solid translucent or transparent polymer and to an article of manufacture comprising a polymer formulated to capture data imparted by incident penetrating radiation. The present invention provides a method of preparation of a solid translucent or transparent polymer matrix capable of detecting and displaying a dose or doses of penetrating radiation by forming within the polymeric matrix a 3D dosimetric map which is measurable and quantifiable by various known procedures. The dosimetric map is representative of the 3D distribution of the dose or doses of the penetrating radiation to which the polymer had been exposed and can be quantified at high spatial resolution, thereby providing an accurate, stable, storable record in three dimensions of the radiation exposure or dosing event(s).